



QUARTERLY PROGRESS REPORT

Project Title:	Implementation of Weigh-In-Motion (WIM) Systems		
RFP NUMBER:		NJDOT RESEARCH PROJECT MANAGER: Nick Vitillo	
TASK ORDER NUMBER/Study Number: 92 / 4-23941		PRINCIPAL INVESTIGATOR: Dr. Ali Maher	
Study Start Date: 06/14/2000 Study End Date: 12/31/2003		Period Covered: 4 th Quarter 2003	

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Literature Search	10%	0%	100%	10%
1. Packaging	17%	0%	100%	17%
2. Testing	14%	0%	95%	13.3%
3. Site Determination	11%	10%	100%	11%
4. Field Implementation & Calibration	16%	15%	75%	12%
5. Monitoring and Analysis	22%	0%	0%	0%
Final Report	10%	0%	0%	0%
TOTAL	100%			63.3%

1. Progress this quarter by task:

- A. WIM installation was completed.
- B. We coordinated with the State Police and also have opened discussions about comparing our data to the Truth Data that the State Police Collects.
- C. Chairs were placed in the grooves to level and elevate the sensors to a height where the top surface was just below the road. The entire groove in the asphalt was outlined with duct tape.
- D. Trenches for the conduit/wires as well as a hole was dug for the junction box on the side of the roadway.
- E. The sensors, wires, conduit and junction boxes were all 'dry-run' placed prior to mixing of epoxy.
- F. The epoxy was poured into the groove up to the chair height and then the sensors were placed on the first layer of the epoxy and chairs, a second layer of epoxy was poured (moments after he first i.e. still during pot life) to finish the encapsulation, fully covering the sides and top of the sensor.
- G. The groove (running from the sensor to the edge of pavement) in the pavement containing the sensor wires was filled with epoxy.
- H. After the sensors were installed the conduit lines (roughly 9" below the grade) with the sensor wires were coupled with the weather tight junction box (roughly 3" below grade) and trenches were backfilled.
- I. During gel time about half an hour after mixing the duct tape was removed from the perimeter of the sensor and epoxy was allowed to set. After one and a half hours the roadway was reopened to traffic.
- J. The DAQ system failed. The unit's motherboard and other parts sustained damage allegedly after one of the data acquisition cards malfunctioned. The cause of this malfunction is presently unknown.
- K. The card's manufacturer has agreed to repair the card.
- L. All other damaged parts in the unit have been replaced. Negotiations have been made with the vendors involved to have service and or parts replaced at a minimal fee, as this malfunction was no fault of our own.



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2. Proposed activities for next quarter by task

- A. Collect data
- B. Calibrate data with the weigh station.

3. List of deliverables provided in this quarter by task (product date)

N/A

4. Progress on Implementation and Training Activities

N/A

5. Problems/Proposed Solutions

- A. In our last quarterly report we stated that the “The DAQ system has started to show signs of failure, we have contact the manufacturer about our concerns. We may need to take the system to a repair shop or possibly switch to another DAQ system.” The DAQ system failed. The portable field computer is currently being repaired. The unit’s motherboard and other parts sustained damage allegedly after one of the data acquisition cards malfunctioned. The cause of this malfunction is presently unknown. The card’s manufacturer has agreed to repair the card. All other damaged parts in the unit have been replaced.
- B. Negotiations have been made with the vendors involved to have service and or parts replaced at a minimal fee, as this malfunction was no fault of our own.
- C. We have been unable to begin collecting data. We expect to receive the DAQ system back from the manufacture in December and then have the DAQ card sent out for repair. This will prevent us from collecting data until the beginning of 2004. This failure has prevented us from collecting data during the most critical time of year where we could have monitored temperature from 90-0°C. Due to this unforeseen failure we would like to discuss an extension to allow us to collect data during a wide range of temperature.

6. Budget Summary*

Total Project Budget(# of years)	2 Years	\$194,500.00
Total Project Expenditure to date		\$103,904
% of Total Project Budget Expended		53%
Task Order Number/Study Number:		92 / 4-23941
Current Task Order Budget (# of years)	Year 1 and 2	\$194,500.00
Actual Expenditure to date against current task order		\$103,904
% of current task order budget expended		53%

* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.

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